



Original Research Article

Influence of supplier management on the implementation of effective procurement practices in tertiary public training institutions in Kenya

Accepted 26 April, 2014

Silas E. Njeru¹, Robert Arasa*², Patrick Ngugi¹ and James Kahiri³

¹Jomo Kenyatta University of Agriculture and Technology (JKUAT), Kenya

²Graduate Business School, Catholic University of Eastern Africa, Kenya

³Kenyatta University (KU), Kenya.

*Corresponding

Author Email: rarasa4@gmail.com
Tel.: +254-0727101731

In Kenya, over 70% of tertiary public training institutions procurement practices are normally not in full compliance with Public Procurement and Disposal Act, 2005 and Public Procurement and Disposal Regulations, 2006 (Joseph, 2010). In over 50% of tertiary public training institutions, the quality and quantity of procured good and services does not meet the raised specifications during tendering. There are several stalled development projects and the actual procurement expenditure is normally higher than the budgeted procurement funds. Supplier management concept is increasingly being embraced towards enhancing effective implementation of programmes and realization of expected goals. This study set out to establish the influence of supplier management on implementation of effective procurement practices in tertiary public training institutions in Kenya. The study employed a descriptive research designs. The study population comprised of a total of 320 procurement staff in procurement departments of all the 40 tertiary public training institutions in Kenya. A stratified random sampling technique was employed to select a sample size of 160 respondents. The main data collection instruments used included questionnaires containing open ended and closed ended questions with the quantitative section of the instrument utilizing both a nominal and a Likert-type scale format. The study findings shows that supplier management factors such as supplier appraisal techniques, supplier selection strategies, supplier selection process, supplier performance methods, supplier relationship management, supplier development and supplier collaboration to a large extent influenced implementation of effective procurement practices in many tertiary public training institutions. The study recommends that managers of tertiary public training institutions should embrace effective supplier management strategies, effective supplier appraisal techniques, better supplier selection strategies, effective supplier selection process, better supplier performance methods, effective supplier relationship management techniques, supplier development and supplier collaboration initiatives.

Key words: Supplier management, effective procurement practices, tertiary public training institutions

INTRODUCTION

In Africa, many public sector organizations view efficient procurement practices as an add-on or an approach that costs more. In truth, sustainable solutions can often cost

less over the whole life of the purchase. Some key benefits include: value for money, protection and enhancement of the environment, more efficient use of resources, greater

social inclusion, fair and ethical trade, support for innovation, better risk management, lower whole-life costs improved supplier relationships, a diverse and flexible supply chain and a competitive edge (Talluri, 2008). Efficient procurement policies and practices are critical for good public financial management and effective budget implementation (Zuzana, 2012). In many African countries, public procurement accounts for a substantial part of fiscal expenditures, making sound procurement methods central not only for sound public financial management but also for inclusive growth (Zuzana, 2012).

Tertiary Public training institutions in Kenya comprises of 40 technical training colleges (GOK, 2012). For the past ten years, many tertiary public training institutions have continued to enroll more students as a result of spontaneous response to the increasing demand for higher education necessitated by the increasing flow of students from schools (Benton, 2007).

The cost of running public training institutions has thus increased due to increase in facilities which has made students to pay higher fees to finance the institutions procurement expenditure. This has created unrests in many public training institutions and hence effective procurement measures are being demanded to help in cutting down the fees as an effort to make higher education affordable to many students (Benard, 2008). In tertiary public training institutions, effective procurement practices entail processes where institutions meet their needs for goods, services, works and utilities in a way that achieves value for money on a whole life basis in terms of generating benefits not only to the organization, but also to society and the economy, whilst minimizing damage to the environment (Thomson, 2007).

In Kenya, over 70% of tertiary public training institutions procurement practices are normally not in full compliance with Public Procurement and Disposal Act, 2005 and Public Procurement and Disposal Regulations, 2006 (Joseph, 2010). In over 50% of tertiary public training institutions in Kenya, the quality and quantity of procured good and services does not meet the raised specifications during tendering. There are either two or more stalled development projects and the actual procurement expenditure is normally higher than the budgeted procurement funds (Paul, 2011). According to a study by Tom (2009) the actual procurement costs in many tertiary public training institutions exceed over 10% of the procurement budget and this leads to increased institutions operational costs. Increased levels of irregularities in undertaking procurement practices has questioned the competency of the members of the tendering committees in many tertiary public training institutions. Integration of procurement procedures with ICT could greatly support effective execution of procurement functions in many tertiary public training institutions (Charles, 2012).

Increased cases of inefficiency and ineptness of the overall administration and management of procurement

functions in many tertiary public training institutions contributes to loss of over Ksh 50 millions annually. A study by Victor (2012) noted that procurement expenditure could be minimized through implementation of effective procurement practices. However, none of tertiary public training institutions have successfully embraced effective procurement practices and this has led to increased procurement expenditure and high institutions operational costs (John, 2012). A relatively well-developed body of research has explored implementation of effective procurement practices in public sector organizations in general with little attention being given to investigating the influence of supplier management on implementation of effective procurement practices in tertiary public training institutions. It is hence against this background that this study was undertaken with a main purpose of establishing the influence of supplier management on implementation of effective procurement practices in tertiary public training institutions in Kenya.

Literature review

Supplier management is a business process that allows a company to adequately select its vendors and negotiate the best prices for goods and services that it purchases. Senior managers monitor the corporate supply chain to ensure that vendors familiarize themselves with the company's operating activities and manufacturing processes (Arthur, 2009).

Supplier management studies have been largely dominated by mathematical models which try to rate and rank suppliers based on a number of pre-defined factors such as cost, quality, service, and delivery (De Boer, 2001). However, in an era of new trends in products and services outsourcing, there is an increasing need to employ theories from other relevant disciplines such as economics, strategy, and organisational behavior to supply management and supplier selection/evaluation/development research (McIvor, 2009).

Although cost, quality and delivery are still the main supplier selection/evaluation criteria and the centre of supplier management strategies, the implications for the long-term capabilities of the whole supply chain have to be considered. Among influential theories in management studies are resource-based view (RBV) and transaction cost economics (TCE). Both have made valuable contributions to understanding business phenomena for years and have been considered in operations and supplier management studies more recently (Hunt & Davis, 2012). RBV, views the firm as a set of valuable and rare resources and assets that can enable the firm to achieve competitive advantage, and long-term superior performance (Barney, 1991).

According to Resource Based Theory resources are inputs into a firm's production process; can be classified into three categories as; physical capital, human capital and organizational capital (Crook, 2008). A capability is a

capacity for a set of resources to perform a stretch task of an activity. Each organization is a collection of unique resources and capabilities that provides the basis for its strategy and the primary source of its returns. In the 21st-century hyper-competitive landscape, a firm is a collection of evolving capabilities that is managed dynamically in pursuit of above-average returns (Sherry, 2005). Thus, differences in firm's performances across time are driven primarily by their unique resources and capabilities rather than by an industry's structural characteristics (Crook, 2008). The study used this theory to establish the capacity of the organization to meet the resources for supplier management for facilitating effective implementation of sustainable efficient practices.

In transaction cost economics (TCE) the focus of the firm is to minimize the sum of transaction costs and production costs (Williamson, 1979). Transaction costs affect the firm's decisions on how they organize their activities, whether to move towards vertical integration (hierarchy) or to prefer market exchange. Thus, TCE defines the boundaries of the firm. According to TCE, the decision of whether to collaborate or not should be based on the efficiency of governance. Transaction cost economics theory identifies and explains the conditions suitable for a firm to manage an economic exchange internally, and the conditions under which it should manage an economic exchange externally (Williamson, 2005). Heide and John (1990) argue that transaction cost analysis is useful in studies of relationships, because it provides insights into the circumstances that cause the development of a closer relationship between the buyers and suppliers. Heide and John (1990) base their theoretical argument on Williamson's (1979) studies stating that the establishment of a closer relationship corresponds to a shift away from market-based exchange toward bilateral governance.

RBV and TCE are important to the study of supplier management, as superior performance achieved in supply chain activities relative to competitors, would explain how these activities can be supported by suppliers and how supplier selection/evaluation/development can contribute to the supply chain core competences (Dey, 2010). Applying TCE underlies the aspects of efficiency and cost focus. Especially, it defines the boundaries of a firm. RBV refers to the firm's internal value creation through its resources and capabilities. Value can be created from supplier relationship management through learning mechanisms, routines and experience. RBV applies the aspects of external and internal social relations, power distribution and the level of dependency on external counterparts. It aims at the optimization of the continuity of the business and the autonomy of a firm. As a summary, it can be said that these theories support the purpose of supplier management, diffusion of supplier information between business units, minimization of transaction costs, value creation through internal capabilities and resources, and reducing the risks of supply dependence and availability

(Ellram, 2008).

Procurement is the process in which public or private organizations buy supplies or services to fulfill various functions such as shelter, transport and need for infrastructures, among many others (Talluri, 2008). Through procurement the organization facilitates the achievement of its own policy goals such as sustainable development (Elliot, 2007). Procurement is every activity associated with the acquisition and supply of goods, works and services from inception of an idea requiring and leading to a "buy" decision to the disposal of the goods or the conclusion of the service (Charles, 2007). According to Chopra (2005) procurement is the process of obtaining goods and services from the preparation and processing of a requisition through to receipt and approval of the invoice for payment. Procurement commonly involves purchase planning, standards determination, specifications development, supplier research and selection, value analysis, financing, price negotiation, making the purchase, supply contract administration, inventory control and stores, and disposal and other related functions (Corsten, 2009).

Procurement practice is called effective when the organization uses its own buying power to give a signal to the market in favor of sustainability and bases its choice of goods and services on; economic considerations with emphasis on best value for money, price, quality, availability, functionality; environmental aspects where emphasis is on green procurement, the effects on the environment that the product and/or service has over its whole lifecycle; social aspects where the effects of purchasing decisions focuses on issues such as poverty eradication, international equity in the distribution of resources, labour conditions, and human rights (UNEP,2007).

Effective procurement practices are strategies followed when making organization purchasing decisions. These practices include building supplier relationships, team-based approaches to procurement and proper use of technology or e-procurement. Implementing effective procurement practices significantly improve the effectiveness of purchasing decisions (Sobczak, 2008). One of the most important effective procurement practices is improving the relationship between the buyers and suppliers. Choosing a supplier based solely on pricings often viewed as short-sighted and may be ineffective. An alternative procurement practice is to use suppliers that offer reliable products at fair prices (Elliot, 2007).

Building a long-term relationship with a reliable supplier can result in better customer service and may prove to be more cost effective over time. Constantly changing suppliers in search of the lowest price can be detrimental to a business for a number of reasons (Daniel, 2010). Changing suppliers on a regular basis may actually result in less reliable service which can end up costing more if deadlines are missed or customers are dissatisfied. Also,

some lower priced vendors may not stay in business as long, so the risk of having to switch suppliers again runs high. Building a relationship with a steady supplier can help build a respectful business arrangement, and the supplier may be more likely to appreciate the steady business and make concessions when needed (Elliot, 2007).

Another effective procurement practice is making an entire organization department responsible in some way for procurement (Simpson and Power, 2007). Making procurement practices more of a team effort boosts employees' morale and improves strategic approaches to purchasing. Some practices include designating a representative from each department to sit on a procurement committee that consults regularly with the procurement department (Mc Crudden, 2008).

One of the most widely discussed efficient procurement practices is the use of e-procurement. E-procurement is an electronic method of purchasing supplies and services. Companies that purchase e-procurement software are able to receive product and service payments online. E-procurement is considered as an effective procurement practice because it can reduce overhead expenses by eliminating purchasing agent costs (Wisegeek, 2013).

METHODOLOGY

The study applied a descriptive research design. Both quantitative and qualitative data was collected to describe the nature and characteristics of factors influencing the implementation of effective procurement practices in tertiary public training institutions in Kenya.

The study population comprised of a total of 320 procurement staff in procurement departments of all the 40 tertiary public training institutions in Kenya. The study applied a stratified random sampling technique to select a sample size of 160 respondents. The main data collection instruments used was questionnaire structured to provide for open ended and closed ended questions with the quantitative section utilizing both a nominal and a Likert-type scale format.

Descriptive statistics method was applied to analyze quantitative data. These data was scored by calculating the percentages, means, STD deviation and Variance. This was done with the aid of Statistical Package for Social Sciences (SPSS) computer software. Inferential statistics was applied through the use of multiple regression analysis to establish the nature of the existing relationship between the research variables.

The multiple regression model applied was in the form;
 $Y = B_0 + B_5X_5 + \epsilon$

Where:

Y= Effective procurement practices

X5= Supplier management

B₀ = constant of regression

B = slope (gradient) showing rate dependent variable is

changing for each unit change of the independent variable.

RESULTS AND DISCUSSION

The main purpose of the study was to establish the influence of supplier management on implementation of effective procurement practices in tertiary public training institutions in Kenya.

The respondents were asked to indicate the extent to which supplier management factors notably; supplier appraisal, supplier selection strategies, supplier selection process, supplier performance, supplier relationship management, supplier development and supplier collaboration hindered implementation of effective procurement practices in the institution. The study adopted a likert type scale of 1-5 (1= not at all, 2 = small extent, 3 = moderate extent, 4 = large extent, 5 = very large extent).

The study findings revealed that, majority (47.4 percent) of the respondents indicated that supplier appraisal affected implementation of effective procurement practices in tertiary public training institutions to a very large extent. Other respondents who were, 31.2 percent, 16.2percent, 3.9 percent and 1.3 percent indicated that supplier appraisal affected implementation of effective procurement practices, to a very large extent, to a moderate extent, to a small extent and not at all respectively.

On supplier selection strategies, 55.2 percent of the respondents indicated that to a very large extent supplier selection strategies affected implementation of effective procurement practices in tertiary public training institutions, 26.0 percent indicated to a large extent, 14.3 percent indicated to a moderate extent, 3.2 percent to a small extent and 1.3 percent not at all.

On supplier selection process, 43.5 percent of the respondents indicated that to a very large extent supplier selection process affected implementation of effective procurement practices in tertiary public training institutions, 39.6 percent indicated to a large extent, 13.0 percent indicated to a moderate extent, 3.9 percent to a small extent and 0 percent not at all.

On supplier performance, 46.1 percent of the respondents indicated that to a very large extent supplier performance affected implementation of effective procurement practices in tertiary public training institutions, 31.2 percent indicated to a large extent, 18.2 percent indicated to a moderate extent, 3.9 percent to a small extent and 6 percent not at all.

The findings on supplier relationship management indicated that, 42.2 percent of the respondents indicated that to a large extent supplier relationship management affected implementation of effective procurement practices in tertiary public training institutions, 29.2 percent indicated to a very large extent, 22.7 percent indicated to a moderate extent, 3.9 percent to a small extent and 1.9 percent not at all.

Table 1. Coefficients

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	3.033	1.300		2.334	.029
SUPPLIER MANAGEMENT	.417	.078	.743	5.329	.000

a. Dependent Variable: EFFECTIVE PROCUREMENT PRACTICES

On supplier development, 37.0 percent of the respondents indicated that to a very large extent supplier development affected implementation of effective procurement practices in tertiary public training institutions, 26.0 percent indicated to a moderate extent, 24.7 percent indicated to a very large extent, 10.4 percent to a small extent and 1.9 percent not at all.

On rating supplier collaboration, 41.6 percent of the respondents indicated that to a large extent supplier collaboration affected implementation of effective procurement practices in tertiary public training institutions, 24.7 percent indicated to a moderate extent, 18.8 percent indicated to a very large extent, 12.3 percent to a small extent and 2.6 percent not at all.

The study findings showed that supplier management factors such as poor supplier appraisal techniques, weak supplier selection strategies, poor supplier selection process, poor supplier performance methods, lack of supplier relationship management, lack of supplier development and supplier collaboration to a large extent hampered implementation of effective procurement practices in many tertiary public training institutions. These findings concurred with Mulwa (2009) that use of poor supplier appraisal methods and application of ineffective supplier selection process discourages implementation of effective procurement practices in many public training institutions in Kenya. Oyugi (2010) also noted that many public training institutions lack effective supplier relationship management strategies and do not collaborate with suppliers and this impacts negatively towards implementation of cost effective procurement practices.

On average, majority 37.84 percent of the respondents indicated that to a very large extent all the supplier management factors affected implementation of effective procurement practices in tertiary public training institutions, 35.54 percent indicated to a large extent, 19.30 percent indicated to a moderate extent, 5.93 percent to a small extent and 1.37 percent not at all. The study therefore deduced that the key notable factors influencing supplier management to affect implementation of effective procurement practices in tertiary public training

institutions includes; supplier appraisal techniques, supplier selection strategies, supplier selection process, supplier performance rating method, supplier relationship management, supplier development and supplier collaboration.

Correlation's analysis results on supplier management and effective procurement practice gave a Pearson correlation coefficient of supplier management as 0.743. This implies that supplier management has a positive correlation with implementation of effective procurement practices.

The results of Analysis of Variance (ANOVA) on supplier management versus implementation of effective procurement practices indicated that the significance of the F was 0.00 which is less than 0.05 and this is a clear indication that there is a positive significant relationship between supplier management and implementation of effective procurement practices. Further regression analysis was carried out to determine the beta coefficients of supplier management versus implementation of effective procurement practices.

Table 1 shows that the coefficient of supplier management was 0.417 and this implies that there is a positive significant relationship between supplier management and implementation of effective procurement practices since the coefficient is significantly greater than zero. The t statics 5.329 is also greater than zero hence also implying that supplier management has a positive influence on implementation of effective procurement practices.

Regression model on supplier management versus implementation of effective procurement practices indicated that the coefficient of determination R square is 0.552 and R is 0.743 at 0.05 significance level. The coefficient of determination thus indicates that 55.2% of the variation on the implementation of effective practices is influenced by the supplier management.

Conclusions and recommendations

Supplier management is a business process that allows a

company to adequately select its vendors and negotiate the best prices for goods and services that it purchases. Senior managers also monitor the corporate supply chain to ensure that vendors familiarize themselves with the company's operating activities and manufacturing processes. Supplier management factors such as poor supplier appraisal techniques, weak supplier selection strategies, poor supplier selection process, poor supplier performance methods, lack of supplier relationship management, lack of supplier development and supplier collaboration to a large extent influenced implementation of effective procurement practices in many tertiary public training institutions.

The study recommends that for tertiary training institutions to realize implementation of effective procurement management practices, managers should embrace effective supplier management strategies in order. These includes effective supplier appraisal techniques, better supplier selection strategies, effective supplier selection process, better supplier performance methods, effective supplier relationship management techniques, supplier development and supplier collaborations.

REFERENCES

- Arthur P (2009). An Overview of EC Policy on Public Procurement: Current Position and Future Prospects", *Public Procurement Law Review*, 1(1):28-39.
- Barney J (1991). Firm Resources and Sustained Competitive Advantage. *J. Manag.* 17(1):99-120.
- Benard P (2008). Purchasing strategies in supply relationships", *J. Bus. Ind. Mark.*, 24 (3/4):173 – 181
- Benton WC (2007). Power influences in the supply chain", *J. Bus. Logist.*, 21(1):49-73.
- Charles N (2008). Centralised and Decentralised Procurement Functions." *J. Manag. Sci.*, 52(11):1751-1763.
- Charles P (2007). Supply chain postponement and speculation strategies: how to choose the right strategy", *J. Bus. Logist.*, 21(2):111-126.
- Charles P (2012). Supply chain postponement and speculation strategies: how to choose the right strategy", *J. Bus. Logist.*, 19(2):1312-1316.
- Chopra P (2005). *Purchasing and supplies chain Management*. (4th Edition). Kogan Page Publishers. Washington
- Corsten R (2009). Public procurement practices in developing countries. *J. Econ.* (22):144-116.
- Crook W (2008). Structural and Market Predictors of Corporate Labor Relations Strategies, *Industrial and Labor Relations Rev.*, 43(2):280-293.
- Daniel P (2010). Implementing 1992 Public Procurement Policy: Public and Private Obstacles to the Creation of the Single European Market", *Public Procurement Law Review*, 1 (2):139-154.
- De Boer L (2001). A Review of Methods Supporting Supplier Selection. *European J. Purch. Supply Manag.* 7(2):75-89.
- Elliot R (2007). What is the "right" inventory management approach for a purchased item?", *Int. J. Operations Production Manag.*, 26(1):50 – 68.
- Ellram LM (2008). Offshore Outsourcing of Professional Services: A Transaction Cost Economics Perspective. *J. Operations Manag.* 26:(2)148-163.
- Dey PK (2010). Multi-Criteria Decision Making Approaches for Supplier Evaluation and Selection: A Literature Review. *European J. Operational Res.* 202(1):16-24.
- GOK (2012). Public Procurement Regulations in Kenya.
- Heide JB, John G (1990). Do norms matter in marketing relationships?, *J. Mark.*, 56(4):32-44.
- John P (2012). Environmental supply chain dynamics", *J. Cleaner Production*, 8: 120-118.
- Joseph E(2010). The Decentralization of Collective Bargaining: A Literature Review and Comparative Analysis, *Industrial and Labor Relations Review*, 47(1):3-22.
- Mc Crudden C (2008). Using public procurement to achieve social outcomes. *Natural Resources Forum*, 28(4)257-267.
- McIvor R (2009). How the Transaction Cost and Resource-Based Theories of the Firm Inform Outsourcing Evaluation. *Journal of Operations Management.* 27(1):45-63.
- Mulwa A (2009). Supplier appraisal methods and effective procurement practices in public institutions in Kenya. *Supply chain management.*
- Oyugi S (2010). Public Procurement Practices. *J. Purch.* 33:149-177.
- Paul S(2011). Procurement methods *J. Purch.* 33:147-159
- Simpson M (2005). Benchmarking the performance of English Universities. *Benchmarking International J.* 14 (1):102-122.
- Simpson M, Power E (2007). Procurement under uncertain lead times – a dual-sourcing technique could save costs", *Engineering Costs and Production Econ.*, 21(1):59-78
- Sobczak M (2008). Quantitative model. *J. Bus. Logist.*, 22:111-117.
- Talluri W (2008). Benchmarking the performance of English Universities", *Benchmarking Int. J.*, 14(1):102-22.
- Thomson P (2007). Supplier selection methods in public institutions. *J. Purch.* 33:149-122.
- Tom, L (2009). An agency theory perspective on supply chain quality management", *Int. J. Operations Prod. Manag.*, 32:148-160.
- UNEP(2007). Public procurement practices in developing nations. UN Report
- Victor A (2012). Procurement practices in public institutions. *J. purch.* 22:144-116.
- Williamson OE (1979). Transaction-cost economics: The governance of contractual relations, *J. Law Econ.*, 22:233-

261.

Williamson OE (2005). Transaction Cost Economics. Springer US.

Wisegeek (2013). Procurement strategies. www.wisegeek.com

Zuzana M (2012). Knowledge of the Firm, Combinative Capabilities, and the Replication of Technology," Organization Science Vol 229(12): 1312-1316.